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BOOK TWO

Restoration, 1919-1925

PART I

The Post-War Stabilization Problem

CHAPTER 9

Recognition, Measurement, and Formulation of the Stabilization Problem, 1918–1920

Although traditional concepts of normal techniques, reserve ratios, and exchange rates, and an abstract conception of gold as standard helped to obscure the true breakdown of the international gold standard, it was clearly apparent in 1919 that the war had left a series of foreign exchange difficulties as a legacy to belligerents and neutrals alike. Not until two years after the Armistice, however, was any sort of consensus arrived at as to the general nature of what may be called the post-war stabilization problem. The main objectives of British foreign exchange policy were nevertheless fixed and immutable from the beginning.

Recognition and Measurement of the Problem by Great Britain

The Cunliffe Committee had given classical expression to the dominant British view on these matters even before the war ended. Its Report dealt with means, not ends, and made recommendations and outlined a course of action that took for granted the continuity of British financial policy. It reflected, but did not justify, explain, or defend the fundamental monetary decisions of Great Britain—not to change the gold content of the sovereign and to eliminate as soon as possible any deviations from parity with gold that might appear in the exchanges. These decisions were not the result of shrewd calculation of the balance of advantage to be derived from a low rate of stabilization or a return to par. Such considerations formed part of many later discussions, but they were not final

determinants of British currency policy. The overriding national advantages of a return to par by sterling, the currency of the world's merchant and the world's banker, was assumed rather than calculated. The will to maintain parity, or if forced to deviate from it, to return to it, was the outgrowth of banking tradition rather than of political expediency or of economic analysis. It may be thought of as the practical application on a grand scale of a deeply ingrained code of banking ethics. In this sense, it may be said that it was based fundamentally on moral considerations, combined with faith in the mechanisms of the pre-war gold standard system based upon long experience. The British paper pound was a promise to pay a certain weight of gold, and this promise had to be redeemed. It was felt that the restoration of the conditions under which it could be redeemed necessarily implied the re-creation of the essentials of the smoothly operating gold standard system of pre-war days.

The Cunliffe Committee charted a familiar, orthodox, and deflationary course, which it regarded as the only one that could achieve these fundamental aims and prevent continual strain on sterling, the dissipation of the Bank of England's gold reserve, and the impairment of Great Britain's competitive position in trade. Such a Spartan policy, however, was impossible immediately after the war, and the practical British policy was to follow the recommendations of the Committee, not all at once, but gradually and persistently. The Committee had grossly underestimated the seriousness of the foreign exchange problem, and the first practical step was to measure it without self-deception or illusion. This was by no means easy, because of the generally artificial nature of the world's foreign exchange rate structure. While the currencies of Russia and the defeated Central Powers had lost most of their value in foreign markets, the exchanges of the other great economic powers of Europe, Asia, and North and South America still showed the familiar outlines of the pre-war system of mint pars. The average daily exchange quotations

on New York in thirteen important widely separated markets show how moderate were the deviations from this system in February 1919. The range from a deviation of 10 per cent

Selected Exchange Rates, February 1919[1] *(percentages of pre-war dollar parity)*

Calcutta	110	London	98
Zurich	106	Copenhagen	98
Madrid	105	Paris	95
Buenos Aires	105	Milan	82
Stockholm	105	Rio de Janeiro	80
Yokohama	103		
Amsterdam	103		
Christiania	102		

above to 20 per cent below, or, if Italy and Brazil are omitted, from 10 per cent above to 5 per cent below dollar parity was not an accurate reflection of the relative values of these currencies. The position of sterling near the middle of this group was the result of a vast pegging operation. The grouping of rates as a whole was artificial and lacked all the essential elements of stability, particularly since the international business cycle, following the long and continuous expansion that had culminated in the last months of the war, had already entered a phase of recession and contraction.[2]

Establishment of a Measure of Sterling Depreciation

The first task of Great Britain, therefore, was to find out the facts. This involved three important steps: (1) to free the sterling-dollar exchange rate from artificial control; (2) to

[1] *Commission of Gold and Silver Inquiry* (U. S. Senate, Serial 8, 1924), pp. 10–1.

[2] Wesley C. Mitchell distinguishes the phases of the four international business cycles beginning in 1913 as follows (*International Pattern of Business Cycles,* 22d Sess., International Institute of Statistics, The Hague, 1934):

1913–14 to 1918: Recession, 1913–14; contraction, 1914–15; revival, 1915; expansion, 1915–18; recession, 1918.

1918 to 1920: Recession, 1918; brief and mild contraction, 1919; rapid revival after spring of 1919; expansion in rest of 1919 and early 1920; recession, 1920.

1920 to 1929: Recession, 1920; severe contraction, 1921–22; revival, 1922–23; minor oscillations around a rising level 1924–28; recession, 1929.

1929– Recession, 1929; severe contraction in 1930–32 or 1933; revival in 1932–33.

reestablish in London a market for gold in which a price could be determined by the play of international demand; (3) to eliminate the control of domestic prices by government so that the internal purchasing power of the pound might once more reflect ordinary economic forces. Only when these three steps had been taken could a 'premium'[3] on gold be established in London which could serve in a significant way as a measure of depreciation in the sense set forth in the Cunliffe Report.

FREEING THE STERLING-DOLLAR EXCHANGE

On March 21, 1919 government control over the sterling-dollar exchange was officially withdrawn.[4] This did not mean, however, that all restrictions on the market were eliminated or that government intervention in the play of supply and demand forces had ended. Until August 1919 the following important classes of transactions which would have involved the purchase of foreign currencies with sterling were still prohibited by Treasury Order:

1) remittances from the United Kingdom by way of loan or for the purchase of securities or property other than merchandise, or for the purchase of foreign currency as an investment, or to be held with a view to appreciation in value
2) the importation of bonds, scrip or other documents of title
3) the purchase of securities which had at any time been in physical possession outside the United Kingdom.

In addition to this drastic limitation on private international financial as distinct from merchandise transactions, the sale of 90 day British treasury bills in New York was continued.

[3] For the various senses in which this term is employed, cf. Ch. 34, The Price of Gold.

[4] Cf. W. A. Brown, Jr., *England and the New Gold Standard*, p. 46. This action had been foreshadowed by (1) the fact that the last substantial credit granted to Great Britain by the U. S. Treasury before that date had not been used as a means of supporting the exchanges; (2) the beginning of the dismantling of the machinery of the American Dollar Securities Committee.

These had been offered in regular weekly installments of $15 million since August 22, 1917, and the amount outstanding did not reach its peak of $98 million until September 30, 1919. Furthermore the British government was still in possession of a substantial amount of dollars from previous credits, and obtained new credits of $200 million in April and May 1919. The proceeds of these credits were in large measure used by the British government to purchase foodstuffs for import into the United Kingdom under the almost dictatorial powers conferred upon the Food Controller in 1916. The Board of Trade, moreover, continued to restrict certain classes of imports under a transitional policy described in the House of Commons on March 10, 1919 by Sir Aukland Geddes, Minister of Reconstruction. The policy of the government was to admit freely raw materials and semi-manufactured articles not produced by British industries brought into being by the war, but, until a date provisionally set as September 1, 1919, to restrict the import of manufactured goods not essential for British consumption, or of a kind produced by industries the government desired especially to shield. At the same time restrictions on exports were greatly relaxed and special efforts were made to encourage the entrepot trade. Sir Aukland was explicit in his statement that one of the considerations by which the government was to be guided in carrying out this policy was the possible effect upon the American exchange of expected heavy imports of raw materials.

Once freed of restrictions, British exports began to increase rapidly in response to active civilian demand, especially on the continent. British short term credit was liberally extended to finance this export movement, and the generally active trade which began after the spring of 1919. The number of bills drawn on London increased sharply, as is indicated by the rise in the portfolio of commercial bills held by the London clearing banks in 1919 and 1920 (Chart 7) and by

the increase in their holdings of acceptances as shown in the accompanying monthly figures (thousands of pounds) from the Macmillan Report (p. 284).

	1919	*1920*
January	43,989	107,276
February	48,992	110,687
March	47,323	99,023
April	45,155	87,463
May	43,733	72,045
June	52,550	64,205
July	62,007	59,864
August	67,327	55,987
September	68,910	54,242
October	65,247	60,067
November	83,839	69,206
December	108,442	69,340

Because it was connected with a movement of goods favorable to sterling, the expansion of short term foreign lending was not in conflict with the general policy of postponing and moderating some of the forces that threatened to weaken the exchange position. This general policy did not allow, however, a similar growth in the flotation of new foreign loans in London. Treasury control over new issues was relaxed slowly. During the last quarter of 1918 a considerable number of new foreign loans had been permitted, but during the first six months of 1919 no foreign government, and only one colonial loan, was placed in London. Some capital was obtained for rubber and mining enterprises through the issue of new shares, but the market was really closed to foreign borrowers. Even after the general relaxation of control over private international financial transactions in August 1919, foreign capital issues continued to be subject to Treasury license. In November 1919 this restriction was removed, and foreign lending expanded somewhat (Table 10), though strong semi-official sanctions restricting new foreign capital issues in London continued to be present in the background (cf. Ch. 11). Their moderate amount during the three years immediately following the war was by no means accidental, and the British government itself began to contract its ad-

vances to its former allies. During the fiscal year 1919–20, which corresponds quite closely to the period of the post-war boom, such advances totaled £163 million as contrasted with £236 million in 1918–19 and £505 million in 1917–18.[5] The Treasury, moreover, was in 1919 already in receipt of large repayments from the Dominions.

TABLE 10

New Capital Applications in London
Foreign, Colonial and Dominion, July 1919–June 1920

	FOREIGN		COLONIAL AND DOMINION		TOTAL
	Government	Corporation	Government	Corporation	
	(thousands of pounds)				
1919					
July		4,821		1,470	6,291
August		127			127
September		2,511		990	3,501
October	1,803	386	6,500	120	8,809
November		4,147	6,200	1,083	11,430
December		17,702	2,000	6,232	25,934
1920					
January		581	5,500	2,041	8,122
February		1,944	2,000	2,733	6,677
March		1,240		2,578	3,818
April		242		1,258	1,500
May		350		1,310	1,660
June			2,500	4,683	7,183

Compiled by Harry Angney from published prospectuses in *The Times*, *Statist*, and *Economist*. With the exception of December 1919, these totals correspond reasonably well with the figures given by the Midland Bank (cf. Ap. Table 4). In all compilations of this sort many judgments have to be made concerning the inclusion or exclusion of individual items and the amounts and dates of the included items. In this compilation Mr. Angney followed the principles laid down by the writer in the study of pre-war British capital exports prepared for the pre-war part of these studies with the help of competent authorities in London.

The first step in the establishment of a measure of sterling depreciation—the freeing of the sterling-dollar exchange—was not fully completed until late in 1919 or even early in 1920. Special defenses provided by the government continued to offer, though in diminishing degree, some resistance to the

[5] Kirkaldy, *op. cit.*, p. 199, Table 1.

decline of the pound in New York, but they were overwhelmed by a long pent-up demand for dollars which carried the sterling-dollar rate to 3.18 in February 1920.[6]

ESTABLISHMENT OF AN INTERNATIONAL MARKET FOR GOLD IN LONDON

The decline of sterling against the dollar in 1919 was not at once reflected in the appearance of a 'premium' on gold in London. As the Cunliffe Committee had pointed out, the link connecting the sovereign and the paper currency of Great Britain to gold bullion had long been broken. In March 1919 when the sterling-dollar rate was freed from control, the export of gold was for the first time legally prohibited. It was therefore still impossible to measure the appreciation or depreciation of any currency in terms of a world price of gold. The price of gold was nowhere determined by world-wide forces. The gold of the European continent was completely shut out of the world's trade by export embargoes. There was an embargo upon the export of gold from Australia. All the gold exported from the Union of South Africa had still to be sold to the Bank of England at its statutory price. Gold could not be exported from the United States except under government license. All the avenues of approach by which gold from abroad could reach the public in India were effectually closed. The possessors of gold in the United States, South Africa, India, or in England, Spain, or France, could not offer their gold to prospective buyers in competition with one another. The purchasers of gold in these countries did not have access to the world's supplies, but on the other hand, they were not exposed to foreign competition for the supplies in their own countries, or in the sphere of influence of their own countries.

In order, therefore, to provide a measure of sterling depreciation in the form of a 'premium' on gold, it was neces-

[6] For a detailed account of the factors in this decline see Brown, *op. cit.*, pp. 55 ff.

sary to reestablish a genuine international market for gold. To do so, and at the same time to prevent the reserves of the Bank of England from being drawn away, new arrangements were put into effect in September 1919 governing the distribution of gold through London. These arrangements included (1) the granting of a license for the export of newly produced South African gold from London; (2) a change of policy in India that permitted Indian demand to become once more effective in the London market.

The Gold and Silver (Export Control) Act of 1920. The new arrangements governing the export of South African gold from London were put into effect by administrative action, and were later sanctioned by the Gold and Silver (Export Control) Act of 1920 (10 and 11 Geo. V Ch. 70). This Act expired by limitation on December 31, 1925, a circumstance that greatly influenced the date of the British return to gold. Its essential provisions were:

"Section eight of the Customs and Inland Revenue Act, 1879 (which enables the exportation of certain articles to be prohibited), shall have effect as if, in addition to the articles therein mentioned, there were included the following articles, that is to say, gold or silver coin and gold or silver bullion.

. . .

Gold produced in any part of his Majesty's Dominions and imported into the United Kingdom under any arrangement approved by the Treasury may, notwithstanding anything in this section, be exported in accordance with the terms of the arrangement.

. . .

It shall not be lawful for any person, except under, and in pursuance of a license granted by the Treasury, to melt down, break up, or use otherwise than as currency any gold or silver coin which is for the time being current in the United Kingdom or in any British possession or foreign country."

Under the terms of this Act, South African gold could once more be sold in London to the highest bidder. The difference

between the price at which this gold was sold in London for export and the statutory buying price at the Bank of England constituted a 'premium' on gold and a measure of sterling depreciation in gold. For five years this 'premium' was basically determined by the fluctuations in the sterling-dollar exchange. It was therefore in actual fact a measure of sterling depreciation in terms of dollars.

The Change of Policy in India. From June 29, 1917 to June 21, 1920 the British government carried out a policy of controlling the import of gold into India. All gold imported into India had to be sold to the government at a fixed price known as the 'acquisition price.' The principles upon which this price was fixed, however, were not constant, and the history of the 'acquisition price' is divided into three distinct phases.

The first phase lasted from June 1917 to September 1919 and was really part of the British war-time gold concentration policy. It rested upon the legal theory that throughout the war the gold standard was maintained in Great Britain and that gold and sterling were identical. The Indian government purchased gold at a price in rupees which was based upon the sterling-rupee rate of exchange and the Bank of England's statutory buying price for gold. Whenever the sterling-rupee rate moved, the price of gold in rupees that the Indian government paid was readjusted so as to produce a bid in the London market of 77 s. 9 d. per standard ounce. India was not allowed to outbid the Bank of England for gold. Toward the end of the war and during the post-war months the sterling-rupee rate moved against England and the corresponding change in the rupee price of gold offered by the Indian government was regularly made. As a result, during the months immediately following the freeing of the sterling-dollar exchange, when the pound was falling rapidly in terms of the dollar, Indian demand for gold became wholly ineffective in the London market. In particular, when the American embargo on gold exports was lifted in June 1919,

gold could not move from America to India because the price offered by India was not a competitive price. Meanwhile, the greatly reduced imports of gold into India resulting from the war-time restrictions and the failure after the war to allow India to replenish her supplies was producing a high price of gold within India. If this price is contrasted with the series of low prices of gold existing within the various belligerent countries as a result of their failure to permit exports, while maintaining the pre-war legal definitions of the gold content of their standard coins, and the obligation of their central banks to buy all gold offered at their pre-war buying prices, a clear view of the disappearance of the *world price* of gold is obtained.

When a free gold market in London was established in September 1919 the policy of India was changed. The fact that sterling and gold were not identical was recognized for the first time in practice by the Indian government, and on September 15, 1919 India began to bid for gold in London at the world price. As sterling depreciated in dollars and the price of gold in London rose, the Indian government fixed a price for gold in rupees which, when converted into pounds sterling, would make possible a bid for gold that was competitive with the price established in that market on the basis of the dollar-sterling exchange. The price of gold in India became a function of both the changing sterling-rupee rate and the changing sterling-dollar rate. All gold imported into India still had to be sold to the government at its buying price, which remained lower than the market price within India itself, but the new policy was flexible and allowed Indian demand once more to be felt, although not in its full force.

In February 1920 this phase of the Indian gold import control policy was superseded by a policy forced upon Great Britain and India by a rise in the price of silver that threatened to reach the point at which the silver content of the rupee was worth more as bullion than as coin. As a conse-

quence of this rise in the price of silver, the sterling-rupee rate was forced rapidly upward until it reached two shillings in February 1920. The new policy was to fix the price at which the government would buy gold, to stabilize the rupee in terms of the dollar, and to move the rate of exchange on London so that an unvarying bid for gold in rupees would always yield a bid in the London market competitive with the bid based on the dollar parity price. This scheme was a failure. The price of silver fell rapidly almost from the day it was put into effect. The rupee was very weak in London, and the Indian bid for gold in London once more ceased to be competitive. Consumer demand in India for gold as an instrument for saving was once more deprived of power to make itself felt in the world market, and a domestic price of gold in India far in excess of the world price resulted.

Finally, in June 1920, all attempts to control the sterling-rupee exchange and the import of gold into India were abandoned. Free access to the world market, in combination with government sales of gold, brought the internal price of gold in India into line with the world price. India was once more able to obtain such gold as she wished to pay for by very slightly outbidding America in the London market.

The second step in providing a criterion of sterling depreciation—the establishment of an international market for gold in London in which a price for newly produced gold could be determined by the play of international consumer and monetary demand—was finally completed by the abandonment of the 'acquisition price' in India. Like the first step—the freeing of the sterling-dollar exchange—it required about a year for its completion.

DECONTROL OF PRICES IN ENGLAND

In order to make the 'premium' on gold in London a true measure of sterling depreciation in terms of dollars, it was necessary also to end the extraordinary domination of the government over British domestic prices. Until that was ac-

complished, the relationship of the exchange rate to the relative price levels in America and Great Britain might be as close as could be desired and still the 'premium' on gold based upon that rate might be a poor measure of the sterling depreciation under conditions of a free domestic economy in Great Britain. At the time the sterling-dollar exchange rate was freed from control, prices were higher in relation to their pre-war level in Great Britain than in the United States. At the rate at which it had been pegged the pound was obviously and measurably overvalued. In addition, the general price level was very much lower than it would have been had government control of prices been less all-pervading. In 1919 the British Food Minister stated that 85 per cent of the total food supplies of the country were bought and sold by the government and that 94 per cent of all commodity prices were controlled.

This was the result of the extension of government control from one commodity to another during the war, forced by the interdependence of prices and by the fact that purchasing power denied expression in one direction sought outlets in other directions. The influence of this government control was indicated, in general, by the decline in the rate of increase in British prices during the latter part of 1917 and 1918. A rapid increase in prices, which began in the spring of 1919 after a brief reaction, was in part the expression of the lifting one after another of various governmental controls, together with the release of purchasing power by the declining demands of government upon available savings and bank credit. So rapid was the increase in prices accompanying the removal of governmental controls that some were, for a time, restored in the latter part of 1919 and in 1920 as a result of public complaint about the rising cost of living.[7] In the main, however, decontrol of prices in England followed quickly after decontrol of the exchanges and the third condition for

[7] Cf. Harris, *op. cit.*, pp. 72, 77, 82. Professor Harris gives a full account of the price control features of British war finance, pp. 62 ff.

ascertaining the true depreciation of sterling was met during the early stages of the restocking boom.

The British Attempt to Return to Normal Techniques of Credit Control

The problem of ascertaining how much sterling was 'depreciated,' though on the surface rather simple, required about two years for its solution. During that time Great Britain was attempting to restore the machinery that the Cunliffe Committee had called "the only effective remedy for an adverse balance of trade and an undue growth of credit." This also was by no means easy, for the authorities were faced both by a conflict of objectives and by changes in technical money market procedures.

The Conflict of Objectives

From 1919 to 1920 the British authorities were trying simultaneously to achieve three objectives: a return to normal trade relations; a return to normal methods of monetary administration as urged by the Cunliffe Committee; and the preservation of the public credit. The restocking and export booms of 1919–20 were clearly welcome from the point of view of the first objective, for they put demobilized soldiers to work in civil occupations and greatly facilitated the always difficult transition from war-time to peace-time production. The encouragement of export credits, as already noted, fitted in well with this objective, but conflicted with a policy of preventing inflation in order to promote the second and third objectives. Restocking booms cannot proceed far without leading to increases in prices and credit expansion, particularly in the form of advances to bank customers. But these were developments directly at variance with the deflationary emphasis of the Cunliffe report and the determination to return as soon as possible to parity with gold. Consequently the authorities took steps to restrict the growth of deposits and of currency in circulation, but in this they were

restrained by the necessity of avoiding the creation of conditions in the money market that would be adverse to the refunding and management of the public debt. The Bank of England and the government, therefore, were under severe handicaps in endeavoring to return to the techniques appropriate before the war to periods when sterling was weak. The joint stock and other banks, on the other hand, were under a strong inducement arising from their ordinary relations to their customers in a time of active business and rising prices to increase their 'advances' even though at the same time they were under pressure to contract other items in their portfolio and were quite willing to do so in order to promote the achievement of the second and third objectives of general policy.

Out of such a conflict of objectives the general result emerged that the Bank of England and the government were in their basic policy attempting to oppose rapid credit expansion, and the banks were in their general policy attempting to promote it, but that there was some vacillation on both sides.

New Relations in the Market

In such a situation of underlying conflict of aim requiring a series of compromises the appearance of certain new relations in the money market was of great importance. These may be described under four major headings: the Currency Note, gold held outside the Bank of England, the rise of the treasury bill, and the fluidity of the ratio system of the joint stock banks.

THE CURRENCY NOTE

The Cunliffe Committee recommended that additional issues of Currency Notes above a fiduciary limit should be covered by Bank of England Notes withdrawn from the reserve of the Bank, and that when Currency Notes were reduced to an amount consistent with the maintenance of a reserve of £150

million, they should be retired and Bank of England Notes substituted. The Committee called attention to proposals to reduce the Currency Note issue by 3 per cent per annum. Though it did not specify this figure, it did recommend that, except in emergencies, the limit of the fiduciary issue of the Currency Note during any year should be the maximum amount of the fiduciary issue during the preceding year. Prior to December 15, 1919 demands from the public for new currency could be met by the issue of either Currency Notes or Bank of England Notes at the will of the government and the Bank, but on that date the recommendations of the Committee were put into effect by a famous Treasury Minute, which fixed the fiduciary maximum at the maximum actually outstanding during the preceding year. This did not mean, however, that the Bank of England Note issue and the Currency Note issue would vary exactly together. Room was still left for considerable elasticity in practice provided the maximum was not exceeded. Furthermore the amount of Bank of England Notes held in the Currency Note Reserve Account could be increased at the will of the Treasury, which could therefore directly influence the Bank of England proportion.

These two circumstances meant that the effects of changes in hand-to-hand circulation upon banking reserves could still be modified to suit the aims of credit policy through the technical administration of the dual system of note issue.

TREASURY BILLS

At the end of the war treasury bills constituted a large part of the secondary reserves of the joint stock banks. Therefore, by *altering the composition* of their secondary reserves they could replenish their primary reserves without contracting their total advances to the discount market or their total investment in bills. By allowing treasury bills to mature without replacing them by others they could convert part of their portfolio into Bank of England balances and make room for

additional investments in commercial bills and additional short term loans. They could increase their short term lending to private borrowers without affecting their customary ratios.

The possession of this means of directly replenishing their primary reserves did not, of course, deprive the joint stock banks of their ability to replenish their reserves indirectly in the traditional English manner by reducing their total accommodation to the market. When they did so, the discount houses had to seek accommodation from the Bank pending a reduction in their own portfolios. Whether this accommodation was obtained by the discount with, or sale to, the Bank of commercial bills or treasury bills was a matter of indifference to the discount houses as long as such accommodation had to be obtained. But the presence in their portfolios of a large volume of treasury bills gave them a new means, if not of avoiding, at least of shortening their visits to the Bank. When the discount houses, faced by a reduction in the total investment of the joint stock banks in bills and in their accommodation to the market as a whole, are obliged to reduce their portfolio of commercial bills, they collect more maturing bills than they buy new bills. This builds up their balances at the Bank of England enabling them to pay off their debt at the Bank, and at the same time reduces 'bankers balances' at the Bank and commercial bank deposits. The three steps of the operation—the original withdrawal of credit from the discount market by the banks, the visit of the market to the Bank of England, and the net repayment of part of the outstanding commercial bills which takes the market out of the Bank—leave the joint stock banks with smaller deposits and secondary reserves, but with primary reserves unchanged, and leave the market with less portfolio and less debt. If, on the other hand, the portfolio of the discount houses is reduced by letting treasury bills run off, their balances at the Bank of England are more quickly replenished than if they had to carry through an adjustment in their port-

folio of commercial bills, and the reserves and deposits of the joint stock banks are not reduced by the collection of checks drawn by debtors under maturing acceptance credits. When the portfolio of the market is in commercial bills the replenishment of joint stock bank reserves at the Bank of England in the traditional way gives a *temporary relief* pending either a contraction in the credit superstructure or some increase in reserves from other sources. When the portfolio of the market is in treasury bills the process gives rise to an *addition* to reserves since maturing treasury bills, unlike maturing commercial bills, are paid off in Bank of England funds, unless the Treasury is forced tò borrow to replace the treasury bills redeemed, in which event there is no change either in bank deposits or in reserves (cf. Ch. 19, Influence of the Rise of the Treasury Bill on the Technique of making Bank Rate effective).

The exercise of these supplementary powers of replenishing reserves was limited by the steps the government and the Bank were able to take in retaliation. The joint stock banks could not use their new powers without creating difficulties for the government in the management of the public debt. If the government was in receipt of sufficient current revenue it was in a position to bring pressure on the banks by reducing its indebtedness to the Bank of England, that is, by reducing Bank of England 'ways and means advances' instead of retiring other outstanding debt, or simply accumulating balances at the Bank. If, on the other hand, current payments were heavy in relation to current revenue, the failure of the banks and the market to renew treasury bills might force the government to increase its borrowings from the Bank of England. Such a situation would strongly incline the government to raise the rate on treasury bills. As long as the treasury bill rate was dominant in the market, this was very likely to force an increase in Bank rate. In any case, the Bank of England, if it found that its control over the market was weakened by the device of letting treasury bills run off,

might feel obliged to take other measures to make its credit policy effective.

GOLD HELD OUTSIDE THE BANK OF ENGLAND

Gold holdings were not completely centralized at the Bank of England after the war, and consequently:

1) Gold held by the joint stock banks was potentially a means for increasing their balances at the Bank of England and thereby promoting an easier money market situation and influencing Bank rate policy.

2) Gold held by the government could be used to relieve pressure on Bank of England reserves by being drawn on to meet special export demands or being deposited at the Bank. On the other hand, the government, by simply withholding this gold at a time when the Bank was not a competitive bidder in the bullion market, could allow all other sources of pressure on the Bank's reserve to have full play.

FLUIDITY OF THE RATIO SYSTEM OF THE JOINT STOCK BANKS

For twenty years before the war the ratio between the sum of 'cash and at the Bank of England,' 'money at call and short notice,' 'discounts,' 'advances,' and 'investments' to 'total deposits' was on the average of 110.6 per cent. It had tended to decline slightly, being 111.5 per cent for the decade 1894–1903 and 109.8 per cent for the decade immediately preceding the war. On July 1, 1913 it was 109.2 per cent. During 1919 and 1920, and indeed throughout the post-war period, it fluctuated between 102 and 104 per cent. This reduction was caused by the more rapid growth of deposits than capital funds during the war. Such a change always affects the ratio system. It makes it inevitable that the sum of the items enumerated should be a smaller proportion of total deposits, and inherently probable that they should be a larger proportion of total liabilities.[8] It is clear, as a matter of simple arithmetic,

[8] This point is supported by the following considerations:

1) If the sum of the enumerated assets was brought into the same relationship to total deposits as before the war, it would have to bear a higher ratio to

that if the sum of these items was a smaller proportion of 'total deposits,' it was impossible to restore all the items individually to their pre-war ratios to 'total deposits.' In particular, if the joint stock banks felt that good banking practice required them to restore their 'investments,' 'discounts,' and 'advances,' or the sum of these three, to their pre-war relationship to 'total deposits,' they could do so only at the cost

total liabilities as long as deposits were relatively greater than capital funds as compared to pre-war. This, however, could be accomplished only at the cost of a decline in the ratio between the other assets of the banks, such as buildings and equipment, to capital funds. The greater the increase in total deposits relative to capital funds the greater would be the decline in this ratio. But this ratio could not be reduced below a certain point and when this point was reached an absolute bar to the maintenance of the pre-war ratio between the sum of the enumerated assets and total deposits existed.

2) If the sum of the enumerated assets was brought into the same relationship to total liabilities as before the war, it would have to bear a smaller ratio to total deposits as long as deposits were relatively greater than capital as compared to pre-war. This, however, could be accomplished only at the cost of an increase in the ratio between the other assets of the banks and capital funds. The greater the increase in total deposits relative to capital funds the greater, on this assumption, would be the increase in this ratio. But a rapid increase in the ratio between the other assets to capital funds was inherently improbable, and beyond a certain point practically impossible. Therefore it was inherently probable that the ratio of the enumerated assets to total liabilities would not be restored to that existing before the war as long as total deposits were much larger relatively to capital funds as compared to pre-war.

3) If the ratio of the other assets to capital funds was restored to that prevailing before the war, the ratio of the sum of the enumerated assets to total deposits would have to be smaller, and their ratio to total liabilities larger, as long as total deposits continued to be larger relatively to capital funds as compared to pre-war.

These three considerations all point to the conclusion that a more rapid growth of deposits than capital funds set up a strong tendency toward a decrease in the ratio of the sum of 'cash and at the Bank of England,' 'money at call and short notice,' 'discounts,' 'loans and advances,' and 'investments' to 'total deposits' and an increase in the ratio of the sum of these items to 'total liabilities.' Consideration 1 shows that the change could not be completely absorbed by an increase in the ratio of the sum of the enumerated assets to total liabilities; consideration 2 shows that it was very improbable that it should be completely absorbed by a decrease in the ratio of the sum to total deposits; consideration 3 shows that it was inherently probable that the change should be shared by the two ratios.

of a reduction in the pre-war ratios of their primary or secondary reserves to 'total deposits,' and, per contra, if they felt that sound banking practice required them to preserve the pre-war ratios of 'cash and at the Bank of England' and 'money at call and short notice' to 'total deposits,' they could do so only at the cost of a reduction in the ratios of their 'discounts,' 'loans,' and 'investments' to 'total deposits.' It was therefore certain that the question of which, if any, of these pre-war ratios the joint stock banks would think it wise or necessary to restore would become of importance in the credit administration of the Bank of England.

At the beginning of 1919 the ratios of 'cash and at the Bank of England' and 'money at call and short notice' to 'total deposits,' were both lower than the customary pre-war figures. The ratios of 'discounts' and of 'investments' to 'total deposits' were both considerably higher, and the ratio of 'advances' to 'total deposits' was much lower than pre-war. The joint stock banks were therefore in a position to bring their ratio system much more closely into line with pre-war practice, though not to restore the pre-war ratio system completely, by largely increasing their 'advances' and reducing their 'discounts' and 'investments.' The circumstances of the time, however, were the reverse of favorable for a reduction in either. If the joint stock banks were willing to reduce still further the ratios of their primary and secondary reserves to 'total deposits,' they were in a position to return to the pre-war ratios of their other principal assets to 'total deposits' by a more rapid increase in 'advances' than in 'discounts' and 'investments,' with an accompanying expansion of deposits. Such a course was technically justified by the completion of the great banking amalgamation movement which brought with it better clearing and reduced the need of cash reserves.

The whole position of the ratio system of the joint stock banks was still in flux, but the changes in it that were most natural and from a technical point of view most defensible, and most in accord with the needs of their customers, were

those best calculated to resist deflationary policies on the part of the Bank of England.

Credit Control, 1919–1920

While the foreign exchange problem was being defined and measured, both the government and the joint stock banks were possessed of unusually strong weapons of attack and defense which they could use to shape conditions in the money market in accordance with their desires. There was a definite conflict of objective and motive between the government and the banks, and on questions of high policy some of the aims recognized by both as desirable were mutually exclusive. Therefore, it was necessary, before there could be a return to normal techniques, to have agreement between the government and the Bank on credit policy, and devise some means for making that policy effective. Concentration of all the gold in the country in the hands of the Bank of England or the government, the reestablishment of a customary and binding practice with respect to joint stock bank ratios, and the treatment of treasury bills in the portfolios of the joint stock banks so as not to interfere with the management of the public debt or counteract Bank of England policy were means tending toward this end. It is clear that the assent and cooperation of the joint stock banks were becoming more than ever essential to the success of any credit control policy. The pre-war method of control indirectly through the short term market had to be supplemented by a larger measure of direct agreement between the great commercial banks, the government, and the Bank of England. It is in the light of this new situation that we shall briefly review the attempt to return to normal techniques in 1919 and 1920.

The most striking features of British banking statistics during the boom which began early in 1919 and continued to April 1920 were a rapid increase in deposits and in notes in circulation and a decline in bank reserves (Chart 19 A and Ap. Table 3 D). Joint stock bank 'advances' rose rapidly

during the entire boom while 'bills discounted' declined. During the last half of 1919 'money at call and short notice' fell rapidly and in the first quarter of 1920 'cash and at the Bank of England' also fell. The net effect of these changes was a rapid growth in deposits throughout 1919, followed by a temporary leveling off. They also produced changes in the ratio system of the clearing banks in harmony with the analysis just given. The ratios of 'discounts,' 'advances,' and 'investments' to 'total deposits' approached much more closely their customary pre-war magnitudes, whereas the ratios of primary and secondary reserves fell very substantially below pre-war (Chart 19 B and Ap. Table 3 D). The fluidity of the ratio system at this time was of great assistance in allowing the banks to respond to the desires of the business community to take full advantage of the boom conditions of the time. It provided the most important means by which the banks resisted deflationary pressure imposed by the Bank and the government in accordance with the general dicta of the Cunliffe Committee.

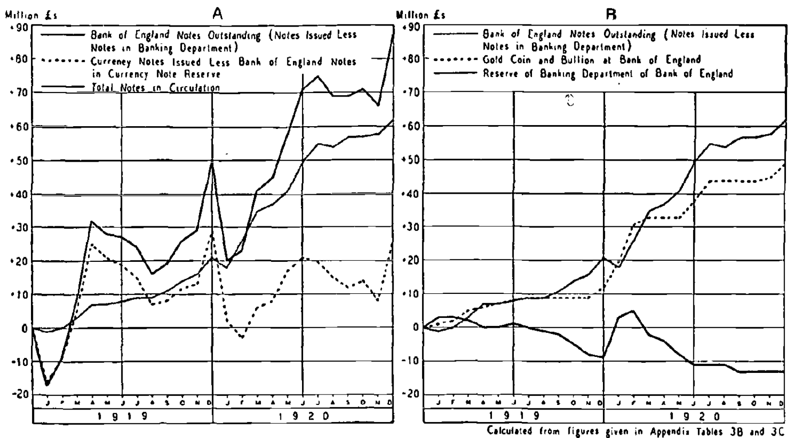
The general growth of deposits itself brought one of the new weapons for enforcing such pressure into play because it was accompanied by an inevitable increase in the requirements for hand to hand currency. The manner in which this requirement was met by the dual system of note issue resulted in direct pressure being put upon both the joint stock bank balances at the Bank of England and the reserve of the Banking Department. The Cunliffe Committee's policy was to place once more upon the shoulders of the banks the burden of providing the community with additions to existing monetary stocks, by withdrawing the relief given to the reserves of both the commercial banks and the Bank of England by the Currency Note system.[9] It was put into practical effect before it was made mandatory by law, and was consistently maintained. During a period of steady and rapid increase in total

[9] Cf. Ch. 5, Building an increased Credit Superstructure on the increased Credit Base.

circulation it was a deflationary policy. Yet the Currency Note continued to give flexibility to the system and mitigated the effects of a rigorous application of the theory that fluctuations in the total currency should be reflected in fluctuations in the Bank of England note issue. Chart 5 A discloses very

CHART 5

Administration of the Dual System of Note Issue and its Influence upon the Reserve of the Banking Department of the Bank of England, 1919-1920, changes cumulated monthly



clearly that the increasing demand for currency was basically met by the Bank of England and that the major fluctuations around the rising trend were taken care of by changes in Currency Notes not covered by Bank of England Notes as reserve.

In accordance with the principles laid down by the Cunliffe Committee, part of the increase in circulation from February to April 1919 was provided by an increase in Bank of England Notes, but the contraction that followed in the early summer was allowed to take place in Currency Notes. After the unusually large mid-year adjustments of June 1919, both the advances and deposits of the joint stock banks rapidly expanded. Prices were rising and further additions to the circulation were required. These additions were again made

in part by Bank of England Notes and in part by Currency Notes. The increase in Bank of England Notes went in part into circulation and in part into the Currency Note Reserve. The transfers to the Currency Note Reserve began in September though it was not until December 15 that the Cunliffe Committee's policy was officially adopted by Treasury Minute.

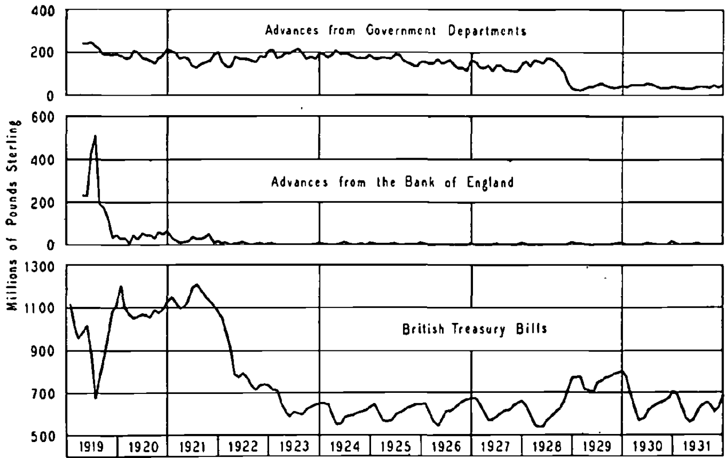
Bank of England Notes outstanding grew, after July 1919, more rapidly than gold at the Bank of England and there was a correspondingly sharp decline in the reserve of the Banking Department, (Chart 5 B). The Bank was therefore under pressure rather to contract its own credit extension than to relieve the joint stock banks from the pressure upon their reserves resulting from their having to supply the public with Bank of England Notes rather than Currency Notes. The joint stock banks, however, were in need of larger reserves as their advances and deposits were growing, and they utilized all available means of getting them. Early in 1919 the preferential interest rates offered them by the Bank of England for foreign balances were withdrawn. 'Special deposits' at the Bank of England declined rapidly (cf. Ch. 5, note 5). It is not possible to trace the effect of this operation upon the joint stock bank reserves but it may be presumed that these 'deposits' reappeared under the heading of balances at the Bank of England at the expense of some other item included under 'cash and at the Bank of England,' or 'money at call and short notice.' The repayment of 'special deposits' probably offset to some degree the reduction in bankers balances at the Bank occasioned by the increase in outstanding circulation.

In addition, the joint stock banks allowed their portfolio of treasury bills to run off, partly to replenish their reserves and partly to make room for increased holdings of commercial bills (Chart 7). Moreover, they forced the discount market similarly to allow treasury bills to mature without renewing them and to borrow at the Bank by cutting down sharply their 'money at call and short notice.' The failure of the

banks and the market to renew treasury bills forced the government also, at times, to borrow from the Bank, as is suggested by a sharp decline in treasury bills and a sharp increase in 'ways and means advances' during the summer of 1919 (Chart 6). At other times, however, owing to the buoyancy

CHART 6

United Kingdom
Composition of the Floating Debt, 1919-1931, monthly



of the revenue during the prosperity of the restocking boom, the government was in a position to bring a counter-pressure to bear on the joint stock banks by using surplus revenue to pay off Bank of England 'ways and means advances,' and thus preventing Bank of England funds withdrawn from the market in payment of taxes from returning to it by the route of government expenditures.

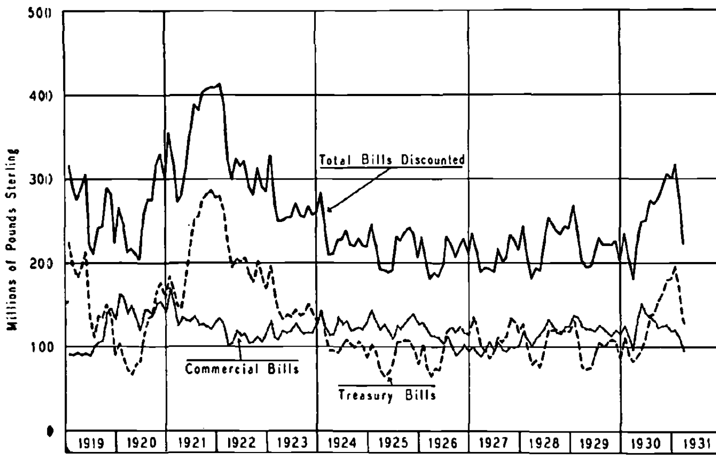
A conflict of this sort was a complicating and aggravating factor in the orderly administration of the public debt and interfered with the third objective of general policy distinguished above. When the government had to borrow from the Bank, it found the Bank an unwilling lender. Both Bank and government were opposed to continued credit inflation, and

in the autumn of 1919 began to raise interest rates. In October and again in November 1919 the treasury bill rate was increased and in November Bank rate was raised to 6 per cent from its war-time level of 5 per cent.

In the first quarter of 1920 these contradictory influences

CHART 7

London Clearing Banks
Bills Discounted, 1919-1931, monthly



continued to play upon the deposits and reserves of the British banking system, but deflationary forces were proving the stronger. In December 1919 and January 1920 moderate gold exports were permitted, but these do not appear to have been taken from the Bank, for gold in the Issue Department was not reduced. On the other hand the decline in the reserve of the Banking Department was accelerated by the rise in the note circulation, while private deposits other than the deposits of the clearing banks increased rapidly in February. In order to 'stave off' a further increase in Bank rate, the joint stock banks deposited most of their remaining stocks of gold with the Bank of England. This gave only temporary relief to the reserve of the Banking Department, however, for notes out-

standing continued to increase more rapidly than gold (Chart 5 B) and in March both the reserve and the proportion resumed their decline (Chart 8).

The deposit of gold by the joint stock banks at the Bank of England does not seem to have been accompanied by any

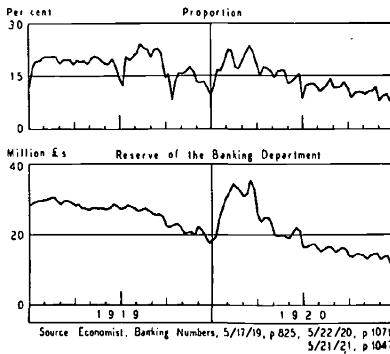


CHART 8

Bank of England, Reserve and Proportion, 1919-1920, weekly

corresponding withdrawal of Bank of England or Currency Notes, for the cash of the London clearing banks declined rapidly in the first quarter of 1920 (Chart 9). The operation,

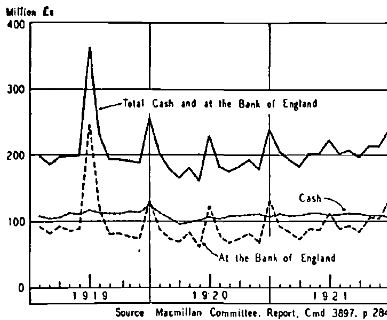


CHART 9

London Clearing Banks, Cash on Hand and Balances at the Bank of England, 1919-1921, monthly

therefore, built up their balances at the Bank, and at the same time they continued to reduce their already low portfolio of treasury bills in the first quarter of 1920 (Chart 7). In March the market was forced to seek relief by redeeming notes and by borrowing at the Bank, and in April the government also

had to borrow at the Bank owing to inability to place treasury bills.[10]

The government, finding itself forced to borrow at the Bank, raised the rate on treasury bills from 5½ to 6½ per cent on April 14, and on April 15 Bank rate was raised to 7 per cent. This marked the end of the post-war restocking boom in England. A 7 per cent Bank rate was retained in force for over a year. The circulation continued to expand slowly and Bank of England reserves to fall. The increase in joint stock bank 'advances' was, however, checked. Deposits continued to grow but at a much slower rate. Prices turned downward. The passage to the normal technique of a high Bank rate to check inflation by putting pressure on the banking system had been stormy, and was still incomplete. For example, not until April 21, 1921, when the tender system for the sale of treasury bills was reintroduced, did the treasury bill rate cease to dominate the market, and many of the new relationships between the government, the joint stock banks, and the Bank of England, which were so clearly in evidence during 1919 and 1920, remained as permanent modifications in the technique of credit management in London.

Clearing the Decks for a General Stabilization Program, 1919–1920

Dispersion of Price Levels, 1919–1920

The rise in prices, which complicated the return to normal techniques and delayed the decontrol of prices in Great Britain, was part of a world-wide price inflation. Credit was being liberally extended in many countries, and both Great Britain and the United States were lending abroad to finance the production and export of goods to fill gaps left in civilian consumption and to place industry upon a peace-time basis. As controls over prices and production were relaxed the concealed inflation of war-time was everywhere making itself

[10] Many of the details in these paragraphs are taken from Harris, *op. cit.*, pp. 191–4.

felt. Prices rose very unevenly in different countries, as is indicated by the accompanying brief table. The relative move-

	INDEX NUMBERS OF WHOLESALE PRICES CONVERTED TO GOLD BASIS (*1913 or 1914=100*)		
	MARCH *1919*	MAY *1920*	PERCENTAGE INCREASE
Sweden (Handelsstidning)	354	361	2
United States (B.L.S.)	196	247	26
United Kingdom (*Statist*)	217	305	41
France (Statistique Générale)	336	550	63
Italy (Bachi)	325	700	115
Germany (S. Reichsamt)	274	1,510	451

SOURCE: *Commission of Gold and Silver Inquiry* (U. S. Senate, Serial 9, 1925), Vol. I and II.

ment of international price levels during this period finally and fully disclosed the inappropriateness of the pre-war system of foreign exchange rates based upon mint pars.

The Pull of the Dollar over the Exchanges

From March 1919 until the end of the boom the foreign exchanges were in process of making a many-sided and mutual adjustment to this new situation. In this adjustment the dollar occupied an exceptional position. In 1919 America had a net export surplus in her merchandise trade with all countries of $4,016 million. In her trade with Europe alone it was $4,337 million, and with England alone it was $1,969 million. The dollar, consequently, was generally strong, especially against European currencies, and more especially against sterling. This was due partly to Great Britain's own international trading position, but also partly to the pressure exercised on sterling by the weakness of other exchanges. Sterling continued to be the main channel of remittance from Europe to America and the foreign assets of many countries in need of New York exchange were either sterling assets or assets that could be realized upon in London. For Great Britain and for European countries in general remittance to New

York was the dominant foreign exchange problem of the time.

A large part of the American export surplus was financed by the extension of short term credits. Dollar acceptances increased from $750 million in 1918 to $1 billion in 1919 and in 1920. Of this amount perhaps three-fourths was due to increased participation of the United States in financing international trade.[11] In addition, many American goods were being sold abroad on open-book account. A very large unfunded trade balance was accumulating in favor of the United States. This was, of course, only a temporary postponement of the problem of remittance to New York which had sooner or later to be met by other means, such as the shipment of gold, the use of previously accumulated foreign assets, or the funding of short term obligations in some way. To the extent that this was not possible purchases in America had to be reduced under the compulsion of heavily adverse exchange rates.

THE MEANS OF REMITTANCE

Gold. The main stream of newly produced gold was diverted from America until September 1919, because of the continuance of British government control of the South African supply, and after that date by the reappearance of effective Indian demand in the London market. South African gold went to India through London from September 1919 to February 1920, precisely when sterling was under the greatest pressure in New York. Special gold shipments to America, however, in a measure counteracted these preliminary effects of the reestablishment of an international gold market in London. In June and October 1919, for example, Great Britain made special remittances of gold to the United States through Canada to relieve pressure on the sterling exchange, and in 1920 gold was shipped from London to pay part of the Anglo-French loan.

In June 1919 the embargo on the free export of gold from

[11] Beckhart, *op. cit.*, III, 311, 314.

the United States, in force since September 1917, was lifted. A gold export movement followed, at first to Spain, South America, Japan, and China, and somewhat later to India. This marked the reappearance of gold arbitrage as an instrument for holding part of the world system of exchange rates together. Pesos, yen, and pesetas were sold in London and the sterling thus acquired was used to purchase gold in New York. This gold movement also disclosed the new position of the United States as a center for international clearance, since the use of European resources previously accumulated in New York to make payments to South American and to Far Eastern suppliers of raw materials was partly responsible for it.[12]

Balances. This use of previously accumulated balances was indicative of the peculiar instability of the world's foreign exchanges. European countries were no longer able, as in 1915, to settle their indebtedness to America by selling to American importers credits obtained by their own exports to other countries. Instead they were forced to draw upon their own inadequate supplies of dollar exchange to pay their own debts in South America and the Far East. Had these parts of the world been, as formerly, debtor to Europe and creditor to America the situation would have been eased, but the opposite was the case.[13]

These transactions were part of a general international redistribution of balances concentrated during the war in New York and London and of their large scale use in payment for goods and debts. In contrast to the situation of August 1914, New York, rather than London, was the major focus of these movements because the replenishment of dollar, rather than sterling balances, was the dominant foreign exchange problem. During 1919 and 1920 many foreign balances were withdrawn from London and transferred to New York. In ac-

[12] *Federal Reserve Bulletin,* March 1920, pp. 219–20.

[13] David Friday, 'Reconstruction in Europe,' *Manchester Guardian,* Sec. 1, April 20, 1922, p. 19.

cordance with the policy of returning to normal techniques in the London market no attempt was made to retain them by continuing to offer special interest inducements. At the same time in New York there was a shift in the international control of balances—those of neutral countries being built up and those of the former Allied Powers being reduced. Previously accumulated balances in New York, redistributed in this way, provided a major means of payment for the exceptional volume of merchandise exports that constituted American participation in the European restocking boom, as well as for the payments by Europe in South America and the Far East. It has been estimated that in December 1918 balances owed by the United States to foreigners were about $1,217 million against American balances abroad of $337 million. Almost all were withdrawn in 1919, 1920, and 1921. In addition, other forms of foreign controlled short term capital in the United States were used to liquidate past debts and to pay for current imports. J. H. Williams has estimated that in 1920 the total withdrawal of short term capital from the United States reached the extraordinary sum of $985 million and in 1921, $435 million.

American Capital Exports. Another major means of payment for American goods was the continued large amount of American capital exports. R. A. Young has estimated that during 1919 these totaled $2.8 billion. New United States government advances were $2.5 billion and private advances of capital funds were a billion dollars, but repayments on government account were $243 million, and repayments on private account plus currency exports were about $600 million. The great era of United States government advances, however, had come to an end, and in order to pay for merchandise imports, Europe had to liquidate very substantial holdings of American securities. During 1920, $739 million of outstanding securities were re-imported into the United States from those who wished to take advantage of the large exchange profit involved in such sales or from other European

sellers of securities who were obliged to liquidate assets to meet the depression or who were engaged in a post-war readjustment of their investment portfolios. When direct American investments abroad and the moderate government advances of 1920 are added to these amounts, the estimate for total capital exports becomes $1,700 million. In a single year American capital exports had declined $1,100 million and had changed radically in character. In 1921 this process continued.[14]

RESTRICTION OF PURCHASES FROM AMERICA

Previously accumulated foreign balances were wasting assets, the era of American credits on a grand scale was drawing to a close, and the basis for large triangular international settlements was absent immediately after the collapse of the restocking boom. It was consequently impossible for American exports to continue undiminished. By February 1920 a painful trade adjustment under compulsion of low exchange rates was already in progress. Its magnitude is indicated both by the size and the distribution of the excess of American merchandise exports over imports.

Excess of American Merchandise Exports (millions of dollars)

	1919	*1920*	*1921*
Europe	4,337	3,239	1,599
Great Britain	1,969	1,318	704
Non-Europe	−321 *	−289 *	375
Total	4,016	2,950	1,974

* Excess of imports

The Behavior of the Exchanges

BREAKUP OF THE STERLING-DOLLAR-FRANC FOREIGN EXCHANGE NUCLEUS

With the freeing of the sterling-dollar exchange from official control in March 1919, the whole system of rates grouped about the central sterling-dollar-franc foreign exchange nucleus and maintained at such cost through the war came to

[14] Young, *op. cit.*, p. 55.

an end. Sterling declined rapidly in New York under the combined pressure of a strongly adverse merchandise balance, a transfer of balances to New York, an increased supply of sterling created by short term advances to the continent, and the use from time to time of sterling as a means of carrying out gold arbitrage transactions. Moderate shipments of gold, the temporary retention of certain war-time price and financial controls in Great Britain, large withdrawals of short term capital from America, and American short term credits and capital exports, even on a large scale, were inadequate defenses against these sources of weakness. The decline of sterling was part of a general decline against the dollar which exercised an extraordinary pull over the world's exchanges.

To this general decline, however, there were two notable exceptions: a small group of currencies that clung to their pre-war relationships to the dollar and the silver currencies, India and China.

It is proper to refer to India as a silver country at this time because the price of silver was rising sufficiently to influence directly the value of the rupee and to present to the Indian government the problems of managing a genuine silver currency rather than a gold or sterling exchange standard. In May 1919 war-time controls over the silver market in London were abandoned. A strong demand for silver from China, combined with the decline of the sterling-dollar exchange, drove up the price of silver in the London market, and in order to protect the rupee from going into the melting pot the sterling-rupee rate was rapidly raised. From 18 d. in May 1918 it rose to 32 d. in February 1920, when the abortive attempt at stabilization in terms of dollars was made.[15] As the dollar-rupee rate is essentially a cross-rate, the rupee rose in New York to the extent that its rise in London was greater than the decline of sterling in New York. The Shanghai tael also rose in New York with the rise in the price of silver.

[15] Cf. Brown, *op. cit.*, p. 33, especially chart showing the sterling-rupee exchange rate and the bullion value of the rupee.

TABLE 11

Exchange Rates of India and China on New York November 1918–December 1920 (dollars)

	RUPEE			SHANGHAI TAEL		
	1918	*1919*	*1920*	*1918*	*1919*	*1920*
January		.357	.440		1.234	1.612
February		.357	.476		1.186	1.610
March		.358	.478		1.122	1.487
April		.355	.468		1.134	1.383
May		.383	.433		1.231	1.198
June		.421	.410		1.248	1.060
July		.416	.383		1.235	1.035
August		.417	.364		1.302	1.120
September		.439	.336		1.321	1.068
October		.436	.305		1.386	.987
November	.357	.433	.297	1.235	1.539	.913
December	.358	.455	.269	1.243	1.618	.788

SOURCE: *Commission of Gold and Silver Inquiry* (U.S. Senate, Serial 8, 1924), pp. 4-55

TABLE 12

Exchange Rates on New York, February and December 1919, Monthly Averages as Percentages of Pre-War Pars and Percentage Declines

	PERCENTAGES OF PRE-WAR PARS		PERCENTAGE DECLINE
	February	December	
Argentina	105.67	101.90	−3.77
Japan	103.39	101.14	−2.25
Spain	105.67	101.09	−4.58
Brazil	80.04	88.64	8.60[1]
Switzerland	106.22	95.60	−10.62
Holland	102.87	94.16	−8.71
Canada		92.81	
England	97.91	78.34	−19.57
Sweden	105.29	80.60	−24.69
Norway	102.24	76.87	−25.37
Denmark	97.51	70.09	−27.42
Belgium		49.95	
France	95.08	47.89	−47.19
Italy	81.61	39.70	−41.91

SOURCE: *Commission of Gold and Silver Inquiry* (U.S. Senate, Serial 8, 1924), pp. 10, 11, 30, 31

[1] Percentage increase.

With the rapid decline in silver prices, which began in February 1920 and converted the Far Eastern countries from buyers into sellers of gold, both the rupee and the tael began to decline in New York. The movement in these two silver exchanges during 1919 and 1920 is shown in Table 11.

By December 1919 the break-up of the war-time sterling-

TABLE 13

Exchange Rates on New York, February 1920
Averages of Daily Quotations as Percentages of Pre-War Pars

Argentina	102	England	69
Japan	98	Sweden	69
		Norway	64
Holland	92		
Spain	90	Denmark	55
Canada	86		
Switzerland	85	Belgium	36
		France	38
Brazil	81		
		Italy	27

SOURCE: *Commission of Gold and Silver Inquiry* (U.S. Senate, Serial 8, 1924), p. 34

TABLE 14

Exchange Depreciation in New York
Five Major Countries, 1919-1921

	DECLINE BEGAN	DECLINE ENDED	PERCENTAGE DECLINE
Canada	Nov. 1919	Feb. 1920	9
Spain	Dec. 1919	Nov. 1920	34
Argentina	April 1920	Nov. 1920	22
Netherlands	April 1920	Nov. 1920	17
Brazil	May 1920	June 1921	47

dollar-franc nucleus of exchange rates had proceeded far enough to indicate a threefold grouping of the currencies, other than the rupee, that had clustered about it during the war: those clinging to the dollar, those following sterling, and those following the franc (Table 12). The small group of countries that had resisted the influence of the decline of sterling immediately after March 1919 or had succeeded after the first few months in checking the decline in their exchanges

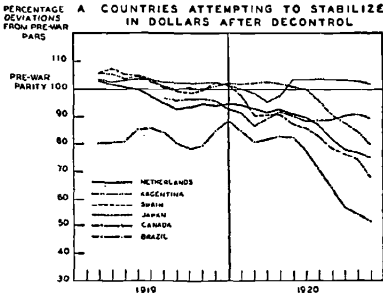
in New York, was, however, already beginning to break up. This is apparent from the distribution of rates about the old pars in February 1920, when the sterling-dollar rate reached its lowest point (Table 13). The months in which the exchanges of some of these countries began to fall in New York, and the extent of the declines are shown in Table 14. Switzerland might have been included in this table on the ground that the Swiss franc during the latter half of 1919 did not follow the decline of sterling in New York, but this country was not really a member of the dollar group, for thereafter fluctuations in the sterling-dollar exchange were faithfully reflected in the Swiss franc-dollar rate.

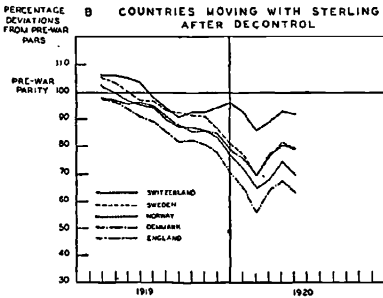
FORMATION OF GROUPS IN THE EXCHANGES

As early as February 1920 the currencies of Belgium, Denmark, Norway, Italy, France, Sweden, and Switzerland were, in their general mode of fluctuation in New York, moving with sterling. The falling away of Spain, Canada, and Brazil

CHART 10

Exchange Rates on New York, 1919-1920
Monthly Averages of Daily Quotations as Percentages of Pre-War Pars





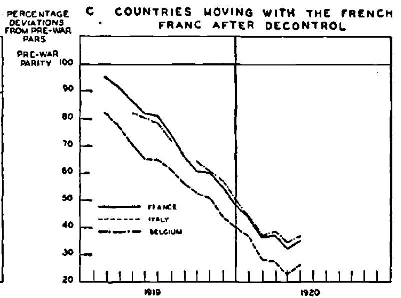


TABLE 15

Exchange Rates on New York, 1919-1920
Monthly Averages of Daily Quotations as Percentages of Pre-War Pars

	ENG-LAND	FRANCE	ITALY	NOR-WAY	DEN-MARK	SPAIN	ARGEN-TINA	BEL-GIUM	HOL-LAND	SWITZER-LAND	SWEDEN	CANADA	BRAZIL	JAPAN
1919														
Jan.	97.9	95.1	81.6	104.2	99.6	104.5	105.6		105.2	106.9	107.8		79.4	104.2
Feb.	97.9	95.1	81.6	102.2	97.5	105.6	105.6		102.9	106.2	105.3		80.0	103.4
March	96.8	91.7	77.6	99.8	96.6	107.3	105.2		101.6	106.0	103.6		80.4	102.4
April	95.8	86.4	70.9	96.6	94.0	105.3	103.9	82.2	100.5	105.1	100.4		80.9	103.1
May	95.9	81.8	65.2	95.0	90.7	104.9	104.5	80.3	99.1	103.4	96.8		85.3	103.8
June	95.0	81.1	65.0	94.5	89.1	103.7	102.7	78.6	97.3	97.9	96.6		85.9	103.2
July	91.0	74.6	61.7	89.9	85.2	100.5	100.7	72.5	94.5	93.8	93.3	96.5	84.2	102.4
Aug.	87.9	66.1	56.3	87.4	81.6	99.5	99.8		92.7	91.8	92.0	95.8	80.1	102.2
Sept.	85.9	60.9	52.9	87.0	82.2	98.7	100.1	64.6	93.1	92.7	91.6	96.3	78.2	102.1
Oct.	86.0	60.2	51.0	86.0	80.8	99.5	100.0	60.9	94.4	92.6	91.0	96.4	79.5	102.1
Nov.	84.2	55.0	43.8	83.0	77.7	102.5	101.2	57.8	93.9	94.0	86.2	95.9	84.8	102.2
Dec.	78.3	47.9	39.7	76.8	70.1	101.1	101.9	50.0	94.2	95.6	80.6	92.8	88.6	101.1
1920														
Jan.	75.6	43.9	37.0	71.6	65.7	98.0	101.8	44.1	94.0	92.7	77.2	91.5	84.9	100.2
Feb.	69.5	36.5	28.6	64.6	55.6	90.4	102.1	37.5	92.9	85.4	69.4	86.6	80.7	98.3
March	75.6	37.3	27.6	67.8	64.3	91.2	102.3	38.8	91.5	88.3	76.0	89.4	81.6	95.3
April	80.8	32.4	23.1	74.0	67.2	90.6	101.9	34.7	92.3	92.9	81.6	91.6	82.7	97.5
May	79.1	35.5	26.8	69.5	62.8	87.1	100.7	37.2	90.9	91.9	79.2	90.0	82.5	103.2
June	81.2	41.0	30.6	65.5	63.0	85.8	99.6	43.0	89.9	94.4	81.2	88.2	77.3	103.3
July	79.4	42.1	30.0	61.6	61.3	82.7	95.6	44.8	87.0	91.3	81.5	88.1	70.3	103.6
Aug.	74.4	37.2	25.3	56.0	55.8	78.2	90.3	39.7	81.8	86.3	76.8	88.6	63.9	103.5
Sept.	72.1	34.9	32.5	52.2	52.3	76.5	87.7	37.1	77.8	84.3	75.4	90.4	56.4	103.1
Oct.	71.4	33.9	20.2	51.5	51.8	74.3	84.3	35.8	76.8	82.4	73.5	90.9	54.0	102.9
Nov.	70.6	31.1	18.8	49.9	50.0	67.5	79.7	33.0	75.1	80.5	71.3	89.2	51.1	101.7
Dec.	71.7	30.7	18.1	55.0	55.4	67.7	81.6	32.4	77.0	79.7	73.1	86.3	47.0	101.0

SOURCE: *Commission of Gold and Silver Inquiry* (U.S. Senate, Serial 8, 1924)

from the group of countries clinging to the dollar was already marked, and the decline of their exchanges in New York continued during the recovery of the pound sterling which began in February 1920 and in which the sterling countries named shared. When, in the summer of 1920, sterling again turned downward it was followed not only by the original sterling group but also by those currencies whose stable relationship to the dollar had been broken. During the latter part of 1919 and 1920 the Reichsmark also, though it had lost approximately 90 per cent of its exchange value, followed in its fluctuations in New York the general course of the sterling-dollar rate. A still larger group of countries moving in a common pattern against the dollar and dominated in their movements by the sterling-dollar rate was thus formed. The partial disintegration of the dollar group and the common movement of the sterling and franc groups are shown in Chart 10 and the supporting figures are given in Table 15.

DISPERSION OF RATES, NOVEMBER 1920

The dispersion of exchange rates from the old parities with the dollar which existed in November 1920 was greater than

TABLE 16

Exchange Rates on New York, November 1920
Averages of Daily Quotations as Percentages of Pre-War Pars

Country	%	Country	%
Japan	102	Brazil	51
		Denmark	50
Canada	89	Norway	50
Switzerland	80	Belgium	33
Argentina	80	France	31
Netherlands	75		
		Italy	18
Sweden	71		
England	71	Germany	5
Spain	67		

SOURCE: *Commission of Gold and Silver Inquiry* (U.S. Senate, Serial 8, 1924), p. 52-3

ever (Table 16). Nevertheless, there was no chaos in the foreign exchanges. They were seeking new levels appropriate to changes in the purchasing power of the various currencies

and to new international trade and financial relationships that had been growing up ever since the outbreak of the war, and even before. They were grouping themselves about their natural leaders. The decks were being cleared for a fresh and more comprehensive general formulation of the whole foreign exchange problem.

Contrasts Established between Legal and Economic Conceptions of the Role of Gold

Gold as Reserve

The general terms of this new formulation of the foreign exchange problem were set by the rapid and unequal rise of prices in former gold standard countries. The role of gold reserves in the banking systems of these countries during this period presents several interesting contrasts. In many countries inadequacy of gold reserves played no role in checking credit expansion. In England, however, which was not 'on' the international gold standard, the gold reserve of the Bank of England and the behavior of its proportion were, in the ways described above, important factors in the application of policies designed to check credit inflation. The amount of the gold reserve was expressed in terms of the pre-war gold sovereign and the proportion, consequently, was not influenced in any way by sterling depreciation in gold. In the *technical administration* of credit control policies in England the measure of sterling depreciation established in the bullion market played no role. In the *formulation of that policy* it played a great role. The British banking system was operated upon the assumption that the pound sterling would in due course once again command abroad the same amount of gold that it had commanded before the war and that it continued to command at home. In formulating its policies the Bank of England had regard for "the safety of its establishment" by using the old measures, and for "the state of the exchanges" by using the new. Though off the gold standard it took the economic steps required of a country 'on' the gold standard.

It retained a conception of 'normal' reserve ratios based not upon the exceptional circumstances of the moment but on the traditional practices of the past and the long run hopes of the future.

In the United States maintenance of the concept of 'normal' reserve ratios was having quite different effects. By the removal of the restrictions on the export of gold America had, in June 1919, resumed all the formal attributes of a country adhering to the international gold standard. An export of gold followed. Yet that loss of gold did not lead to any credit restriction in the United States. On the contrary, it was accompanied by an ever expanding growth in the superstructure of bank credit. This is in rather marked contrast to pre-war gold standard tradition. It is true that in its management of the gold standard before the war the Bank of England sometimes permitted gold to be drawn from its reserves without taking steps to restrict credit. This happened, however, only when the Court believed that the gold would return to it in due course, as in the case of regular seasonal movements. The gold export from the United States after June 1919 was not of this character, and on pre-war gold standard principles action should have been taken to check it. It was a purely fortuitous circumstance that the American banking system held sufficient excess gold reserves after the war to meet this demand. Until December 1919, after the successful flotation of the Victory Loan, the structure of interest rates in the New York market was dominated by the will of the Treasury. It was impossible for the Federal Reserve banks to adopt a credit control policy by the use of the discount rate. Though deeply concerned over the course of the inflation, the authorities of the system were not under the compulsion to take action imposed by a depletion of gold reserves in a gold standard country committed to a rigid conception of 'normal' reserve ratios. The gold exports did not, until the middle of 1920, cause the reserve ratio of the Federal Reserve banks to approach the legal minimum.

The financing of the post-war boom, therefore, met with no check from gold reserves in the United States, because gold reserves were regarded from a formal and legal rather than from a general economic point of view. The tradition of 'normal' was indeed carefully preserved, and the depletion of gold reserves exercised an important economic pressure upon the American credit system at the culmination of the 1920 boom. But both before and after, the legally defined gold reserve ratios of the Federal Reserve banks were not a continuing factor in the guidance of American credit policy. They did not contribute greatly to the establishment of stable credit conditions. They were, for the most part, an abstract legal concept which intermittently exercised a psychological influence on credit control policy, and on rare, but notable occasions, determined the course of action in time of crisis.

The idea of normal reserve ratios in many other countries was intimately bound up with a conflict between legal and economic conceptions of the role of gold as the monetary standard. It was this conflict that introduced hidden reserves into the accounting of central banks and deprived their published reserve ratios of definite meaning except as statements of the situation that would have prevailed had pre-war exchange rates on New York been maintained and as promises to see that such rates would be restored in the future.

Gold as Standard

Not only England, but all former gold standard countries used the New York exchange as a measure of the depreciation of their currencies in terms of gold. They continued, however, to preserve in their domestic accounting treatment of the metal the concept that there had been no such depreciation.

The arrangements by which the export of South African gold from England was permitted in September 1919 are of particular interest from this point of view. Under these arrangements N. M. Rothschild and Son, who had long been

agents for the sale of a portion of the South African gold production in London, were appointed the London agents for all the South African gold mines. Contracts were entered into between them and the Transvaal Chamber of Mines and the Bank of England under the terms of which the members of the Transvaal Chamber of Mines were to ship gold to the Bank of England, which undertook to see that licenses for the export of that gold were issued within five weeks after its receipt. During the war gold shipped to the Bank of England had been purchased by the Bank at 77 s. 9 d. per standard ounce. Under the new contracts the Bank delivered the gold to refiners acting for the producers, though still maintaining the price at 77 s. 9 d. After the gold had been refined, the refiners sold it at the same price to N. M. Rothschild and Son who immediately resold it to the highest bidder. The gold was offered to the trade and to the bullion brokers in London who were given an opportunity to bid for it on the basis of a 'net parity price' with New York, arrived at by dividing the price of gold in New York by the rate of the sterling-dollar exchange and deducting freight, insurance, and other expenses. Whatever gold was not taken by the bullion market at above the New York parity price was shipped by N. M. Rothschild and Son to the United States after they had sold dollars against it. It is to be noted particularly that the price at which N. M. Rothschild and Son purchased the gold from the Bank of England was the statutory price, and that the difference between it and the open market price, which constituted the 'premium' on gold in London, was later paid by a tri-monthly settlement. The Bank of England by these arrangements kept detailed control over the actual passage of the gold in and out of England,[16] and even while acting as an intermediary for others did not alter its statutory buying price for gold.

[16] Because the license to export covered South African gold alone, small shipments coming from other parts of the world to the London market for sale had to be disposed of either to the trade or to the Bank of England at prices far below the open market price for South African gold.

By these means a sharp distinction was drawn between *gold in England* and *gold in England plus a license to export.* This distinction maintained the legal fiction that the gold standard was still in force in England, and the popular belief that that legal fiction had substance and economic significance. It made it possible for the Chancellor of the Exchequer, Stanley Baldwin, in introducing the Gold and Silver (Export Control) Act in Parliament, to speak in the following terms:

"The great danger of which those who are responsible for the guarding of the gold in this country are apprehensive is this: If at any time in this country any accumulation of gold is allowed to grow up of which they have not complete control it always increases the danger of smuggling gold, and makes the work of the melter of gold coinage much easier. The really effective protection against the melting of gold coin today is the impossibility of getting gold out of the country. If there were any such relaxation as would make it more easy, by smuggling, for the melter of gold coins to get the melted gold out of the country there would be the risk of a drain of gold. If that took place to any extent *we should run the risk of having to suspend gold payments and fall back on unconvertible paper money,* which, of course, would lead to the greatest panic in this country that ever was seen." [17]

The conflict between the economic and juridical view of gold as the monetary standard, which prevailed in many countries after the war, clearly could not continue indefinitely. The new distribution of the exchanges around the pre-war parities, which began to be defined in 1920, made it necessary to face the problem of bringing the two conceptions again into harmony. For this reason it was imperative to formulate a general foreign exchange policy which should be a policy of ends as well as of means.

General Formulation of the Post-War Exchange Stabilization Problem

The British decision to return to the old parity with the dollar was taken on the day when sterling first deviated from

[17] 136 H. C. Deb. 5s., p. 116 (our italics).

it.[18] Because of the magnitude of the deviation from the old parities of many exchanges during their general decline in terms of the dollar, it was obvious that an attitude like that of the Cunliffe Committee could not be maintained in all countries. The economic costs of returning to the pre-war rates of exchange, through the application of principles such as those embodied in the Cunliffe Report, would be prohibitive for such countries as Russia, Austria, and Germany. The appropriate policy for France and Italy was at least debatable, though in both countries the expectation of a return to 'normal' in this respect was very slow in dying.[19]

It had become clear during the early stages of the restocking boom that some general statement of the nature of the foreign exchange problem, which would be authoritative and would represent a broad general consensus of opinion, was highly desirable. Such a formulation was accomplished at the Brussels Conference of 1920. A distinction was there made between the policy appropriate to countries whose exchanges were depreciated little and to those whose exchanges had depreciated much. In his memorandum to the Conference, Professor Pigou set forth the alternatives in the following terms:

"The decision by any country so to control its currency as to establish a parity, or rather centre of parity, between that currency and gold leaves open a fundamentally important issue. What parity shall be established: shall it be the pre-war parity, or the parity that is found to exist when the process of 'inflation' is brought to an end, or some parity intermediate between the two? The principal relevant conditions are as follows. In favour of a return to pre-war parity it may be urged that the adoption of any lower parity means deliberate government depreciation of

[18] This was the answer given to the writer by the highest money market authorities in London in reply to the question, 'When did England decide to return to gold at the old par?'

[19] According to Emile Moreau, Governor of the Bank of France, M. Poincaré was, even in 1928, "at the bottom of his heart," a believer in a return to par; 'Le Rèlevement Financier et Monétaire de la France, 1926–28,' *Revue des Deux Mondes*, April 15, 1937, p. 826 and pp. 825–46, passim.

the currency, and so lowers general confidence in the financial probity of the country in which it is done: and that it is unfair to all lenders at fixed interest, whose loans were made before the war or during its earlier stages before the currency had greatly depreciated. On the other side it may be urged that in countries where the currency is greatly depreciated, a return to pre-war parity would involve an enormous contraction of currency and fall of prices, that this could only be brought about by a long continued regime of high money rates and consequent check upon industry; that it would necessitate a more or less corresponding reduction of money wages only attainable through serious friction and many stoppages of work. Moreover, it would involve the payment of interest on war loans in a currency much more valuable than that in which a large part of them were subscribed. Yet again, money incomes being reduced in proportion as currency was appreciated, it would make necessary much higher rates of tax to provide interest and sinking fund on the debt, and this would make more difficult the fiscal problem of balancing the budget.

In the light of these considerations it is clear that the case for a return to the pre-war parity is stronger—that is to say, the arguments in favour of it have more, and those against it have less force—the nearer to this parity a country's currency is found to be when 'inflation' is finally stayed." [20]

Once the idea that new rates of exchange must be chosen by many countries was accepted, the question of the basis of such a choice became all important. It was the great service of Professor Cassel that, at this juncture when the course of the exchanges presented in outward semblance a picture of chaos, he provided a clarifying principle of action in the form of his restatement of the purchasing power parity doctrine. In the light of this generalization, and with the informa-

[20] A. C. Pigou, *Memorandum on Credit, Currency, and Exchange Fluctuations* (submitted to the Brussels Conference), 1920, p. 11. Professor Pigou's entire memorandum proceeds upon the assumption that under the conditions existing in 1920 gold was essentially more stable than sterling. This assumption was a natural one but the history of the fourteen subsequent years necessitates its reexamination. Cf. Ch. 34.

tion made available through such calculations as those which first made their appearance in the Memoranda on Currency of the Financial Section of the League of Nations, an intelligible general picture was obtained of the approximation of actual exchange rates to some point where stabilization might be successfully effected.